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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/619,682	07/15/2003	Sarah Elizabeth Witt	450110-04642	7074

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EXAMINER	
BRIER, JEFFERY A	

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 01/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/619,682	WITT ET AL.	
	Examiner	Art Unit	
	Jeffery A. Brier	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11, 16, and 17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11, 16, and 17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Detailed Action

Response to Amendment

1. The amendment filed on 10/11/2005 has been entered. The amendments to the title and to the specification overcomes the objection to the specification set forth in the action mailed on 7/12/2005. The replacement sheet containing figures 6 and 7 overcome the objection to the drawings set forth in the action mailed on 7/12/2005. The amendments to the clams overcome the 35 USC 101 non-statutory rejection. The amendment to clam 9 overcomes the 35 USC 112 second paragraph rejection based upon lack of antecedent basis.

Response to Argument

2. Applicant's arguments filed 10/11/2005 have been fully considered but they are not persuasive.

The arguments concerning claim 1 are not persuasive. The arguments concerning the term superpose is not persuasive because the term superpose is defined as "To set or place (one thing) over or above something else." at dictionary.com. This is not the same as alpha blending. In alpha blending two images are blended together based upon each images alpha value. Applicant referred to page 15 lines 33-34 of the specification which incorrectly describes figure 9B as superposing because figure 9B actually shows the original page turning page over foreground image of figure 9A by using alpha blending where the alpha value is 1. Thus, the mechanism used by applicants invention uses alpha blending rather than the more simple

superposing. As will be seen below claim 1 does not accurately correspond to figures 9A to 10 as illustrated and described in applicants specification.

The arguments concerning claim 2 are not persuasive. Step viii is misdescriptive of the replacing since page 16 lines 29-35 discusses replacing more than just the edge regions with the softened version of the combine image. Page 16 lines 32-35 states:

Any image region for which the alpha value is less than one is replaced at this stage by the corresponding region of the softened image. This will include regions associated with the pagecurl effect shown in FIG. 9D.

Thus, the word "only" in step (viii) is misdescriptive of the replacing process which replaces more than peripheral edge regions.

The arguments concerning claim 8 are not persuasive. An alpha value less than 1 is not a high value of transparency since values less than 1 would progressively go from low transparency to higher transparency until total "0" transparency is reached.

Page 16 lines 32-35 states:

Any image region for which the alpha value is less than one is replaced at this stage by the corresponding region of the softened image. This will include regions associated with the pagecurl effect shown in FIG. 9D.

Thus, the word "high transparency " in step (viii) is misdescriptive of the replacing process which replaces more than peripheral edge regions.

The arguments concerning claims 9-11 are not persuasive. The specification at page 14 line 30 to page 15 line 2 discusses image regions which are not oriented parallel to the display plane and states:

Vector unit one 108 also calculates the appropriate lighting for each tile vertex of the page curl. The appropriate lighting is determined from the angle between the normal to

the tile at that vertex and the line connecting the light source to the vertex. The lighting effects are implemented using a combination of RGB gain and white fogging. However, for portions of the page curl surface that are almost perpendicular to the plane of the screen the lighting values are not applied to Alpha (although RGB lighting is still applied). Such portions of the image are identified as those for which the non-linear part of the transform does not change the z value of any of the vertices of the primitive.

Clearly, this only discusses not applying the lighting values and does not discuss setting transparency coefficient for pixels in an image region which are not oriented parallel to the display plane to indicate a non-zero degree of transparency.

Specification

3. The disclosure is objected to because of the following informalities:

The Summary of the Invention fails to summarize accurately the disclosure of figures 9a to 10.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-11, 16, and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The amendments to claims 1 and 16 and the similar limitations in new claim 17 convey a different method then that which is conveyed by the detailed specification and associated drawings.

Claim 1:

Steps (iii), (iv) and (v) are misdescriptive and incomplete because according to the detailed description of figures 9A to 10 step (iv) occurs before step (iii) and step (v) occurs after the anti-aliasing step (iii). In addition steps (i) to (v) do not perform the function alleged in the preamble without additional steps. Thus, the body of the claim is incomplete with respect to the preamble. The additional steps of claim 2 are needed to perform the alleged function set forth in the preamble.

Figure 9A is described at page 14 lines 14-20 as:

FIG. 9A schematically illustrates an image in which standard Playsation2 anti-aliasing of graphics primitives has been applied. In creating image version 1 of FIG. 9A a video background image is created. The background image is simply untransformed full-screen video which is drawn as a textured sprite that is the full size of the screen. No tiling of graphics primitives, anti-aliasing or lighting effects are required. In subsequent stages the background image is alpha-blended with the foreground using the alpha values of the foreground image.

Figure 9A is described at page 15 lines 16-32 as:

The foreground image of FIG. 9A has anti-aliasing applied to the perimeter of each graphics primitive. Accordingly, we shall refer to this as the "primitive processed" image. As described above, the anti-aliasing process performed by the graphics synthesiser 200 involves calculating a "coverage" (which is the ratio of the area of the actual line which covers each pixel) to each pixel at the edge of the graphics primitive. The coverage value is assumed to be the alpha value for the pixel and alpha blending is performed on the destination colour (i.e. the colour in the background of the graphics primitive) and the graphics primitive colour. The anti-aliasing has the effect of blurring the edges of the graphics primitives in the primitive processed image. Although this effectively destroys detail, it generally has beneficial effects in enhancing visual appearance of the image. However when performing video processing where the drawing order is unpredictable the anti-aliasing around the perimeter of the graphics primitives results in undesirable patterning in the body of the image associated with the blurred edges of the graphics primitives. Furthermore the alpha values of the edges of the graphics primitives are altered during the anti-aliasing procedure so that the

graphics primitive edges become semi-transparent. The anti-aliased edges do however improve the image appearance around the periphery of the page.

Clearly the foreground image is superposed onto the background image and then the image illustrated in figure 9a is anti-aliased, thus, the foreground image is anti-aliased after it is superposed onto the background image.

Figure 9B is described at page 15 line 33 to page 16 line 13 as:

FIG. 9B schematically illustrates an image created by superposing a non anti-aliased version of the image over the primitive processed foreground image of FIG. 9A. To overcome the undesirable patterning effect in the body of the primitive processed image of FIG. 9A a non primitive processed version of the foreground image is generated i.e. an "original image" version in which the graphics primitive edges have not been anti-aliased. The original image is superposed over the primitive processed image to produce image version 2 which is the "combined" image shown in FIG. 9B. Since the peripheral edges of the primitive processed foreground image have been blurred due to the anti-aliasing these blurred edges extend outside the area occupied by the original image and thus remain exposed following the superposition. For the purposes of the superposition the alpha=1 for all pixels of the original image i.e. it is completely opaque so that it totally obscures the underlying primitive processed image region. In the exposed peripheral region of the primitive processed image the alpha value corresponds to the value calculated from the coverage ratio during the anti-aliasing process. A z test is performed to determine which part of the image is on top: If Z.sub.new>=Z.sub.old then the new pixel value is visible on top of the old pixel value and is therefore rendered.

Figure 9C is described at page 16 lines 14-26 as:

FIG. 9C schematically illustrates the process by which horizontal and vertical filtering of the full screen of video corresponding to the combined image of FIG. 9B is performed to produce a softened image version. The combined image version is manipulated to produce a softened image. Horizontal filtering is achieved by shifting the image by 1/2 pixel horizontally, which forces interpolation. A simple shift would not be as effective a filter in the vertical direction because of the interlaced nature of the image. Instead, vertical filtering is achieved by doubling the vertical size of the image to force interpolation of pixel values that must be inserted to double the vertical extent. The

image is subsequently reduced in size vertically by 1/2 so that an averaging of pixel values is achieved and the image is shifted back horizontally by 1/2 pixel. The result of this horizontal and vertical filtering is a "softened" image version. This softened image version will be used to replace predetermined regions of image version 2 illustrated in FIG. 9B.

Figure 9D is described at page 16 lines 27-35 as:

FIG. 9D schematically illustrates how a final anti-aliased image is produced by replacing portions of image version 2 of FIG. 9B with corresponding portions of the softened image of FIG. 9C. The softened image version is used to replace a region of one graphics primitive (8 pixels wide in this embodiment) just inside the peripheral boundary of the non-anti-aliased region in FIG. 9B. A peripheral region of image version 2 is replaced by the corresponding portion of the softened image. Any image region for which the alpha value is less than one is replaced at this stage by the corresponding region of the softened image. This will include regions associated with the pagecurl effect shown in FIG. 9D.

The discussion of figure 10 at page 17 lines 1-15 emphasizes that steps (ii) to (v) of claim 1 are presented in an incorrect order which renders the claims misdescriptive and incomplete

Claim 2:

Step viii is misdescriptive of the replacing since page 16 lines 29-35 discusses replacing more than just the edge regions with the softened version of the combine image. Page 16 lines 32-35 states:

Any image region for which the alpha value is less than one is replaced at this stage by the corresponding region of the softened image. This will include regions associated with the pagecurl effect shown in FIG. 9D.

Claim 8:

At lines 5-6 a high degree of transparency is claimed while the specification at page 15 lines 29-32 describes semitransparency. Semitransparency has a different scope than high degree of transparency. Thus, either the claim needs amending or the specification needs amending to provide antecedent basis for the claim.

Claims 9 to 11:

These claims are not described in the specification. Refer to page 14 lines 21-23, line 31 to page 15 line 2. Thus, these claims do not clearly claim the described invention.

Claims 16 and 17:

These claims have the same problems identified above for claim 1 and are indefinite for the same reasons.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 9-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

These claims are not described in the specification. Refer to page 14 lines 21-23, line 31 to page 15 line 2. These claims do not enable one of ordinary skill in the art to practice the method of these claims without undue experimentation. What transformation is applied to a source image to generate the original foreground image. The brevity of the claim would force one of ordinary skill in the art to apply many transformations but one of ordinary skill in the art would not be able to determine the correct transformation because the end result of the transformation has not been disclosed. How much of a non-zero degree of transparency is the transparency component and how would one of ordinary skill in the art know which non-zero transparency to select? How would one of ordinary skill in the art know which non-zero transparency to select based upon the angle between the image regions and the display plane? How would one of ordinary skill in the art know which non-zero transparency to select and when to apply it based upon if said primitive does not form part of a contiguous parallel set of primitives?

A prior art rejection cannot be made because the metes and bounds of the claims are not definite and because the specification does not support the claims. Thus, an indication of allowability would be premature. In re Steele, 305 F.2d 859,134 USPQ 292 (CCPA 1962) (it is improper to rely on speculative assumptions regarding the meaning of a claim and then base a rejection under 35 U.S.C. 103 on these assumptions).

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffery A Brier whose telephone number is (571) 272-7656. The examiner can normally be reached on M-F from 7:00 to 3:30. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Razavi, can be reached at (571) 272-7664. The fax phone Number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jeffery A Brier
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Art Unit 2672